

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the matter of)	
)	
Amendment of Part 2 of the Commission's)	DA 06-1279
Rules to Allocate Spectrum Below 3 GHz)	
for Mobile and Fixed Services to Support)	ET Docket No. 00-258
the Introduction of New Advanced Wireless)	
Services, Including Third Generation)	
Wireless Systems)	
)	
Service Rules for Advanced Wireless)	WT Docket No. 02-353
Services In the 1.7 GHz and 2.1 GHz Bands)	
)	

**CLEARINGHOUSE PROPOSAL OF PCIA – THE WIRELESS INFRASTRUCTURE
ASSOCIATION**

**PCIA – THE WIRELESS
INFRASTRUCTURE ASSOCIATION**

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**CLEARINGHOUSE PROPOSAL OF PCIA – THE WIRELESS INFRASTRUCTURE
ASSOCIATION**

I. INTRODUCTION AND SUMMARY

In response to the above-captioned *Public Notice*, PCIA – The Wireless Infrastructure Association (“PCIA”) is pleased to submit the following proposal to establish a clearinghouse that will administer the relocation cost-sharing plan for licensees in the 2.1 GHz band set forth in the *AWS Ninth Order*.¹

PCIA is a non-profit trade association that has a long and broad history dedicated to the advancement of wireless communications, dating back more than 50 years through its current incarnation and predecessor associations. For decades, PCIA has been an FCC-recognized frequency coordinator for the business and industrial radio services, serving hundreds

¹ *In the Matter of Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of new Advanced Wireless Services, including Third Generation Wireless Systems, Service Rules for the Advanced Wireless Services In the 1.7 and 2.1 GHz Bands*, ET Docket No. 00-258, WT Docket No. 02-353, Ninth Report and Order (rel. April 21, 2006) (“*AWS Ninth Order*”).

of thousands of users. PCIA has worked extensively in support of the initiation of innovative wireless services for the American public. PCIA's wide range of experience working on behalf of many different types of wireless interests gives PCIA a unique scope of knowledge and positive reputation as an expert "honest broker" in the complex and fast-changing field of wireless telecommunications.

Notably, in 1996, PCIA was chosen by the Commission as a clearinghouse to facilitate the relocation of microwave incumbents in connection with the most significant wireless spectrum allocation in the latter part of the twentieth century, *i.e.*, the clearing of spectrum for the establishment of new Personal Communications Services ("PCS") at 1.8 – 2.2 GHz (the "PCS Bands").² From 1996 until the sunset of the PCS cost-sharing regime on April 4, 2005,³ PCIA operated the Microwave Clearinghouse ("MWCH") – the clearinghouse responsible for administering the majority of the cost-sharing that occurred in the PCS Bands. The success of the MWCH is evidenced by the fact that representatives from Australia, Canada, France, Taiwan and Japan studied the operations of the MWCH for possible application to spectrum transitions in their countries.

Based on the prior success of the PCS clearinghouse approach, in the *AWS Ninth Order*, the Commission delegated authority to the Wireless Telecommunications Bureau ("WTB") to designate entities such as PCIA to serve as cost-sharing clearinghouses that will facilitate relocation cost sharing in the transition of different types of incumbent licensed users

² *Amendment of the Commission's Rules Regarding a Plan for Sharing the Costs of Microwave Relocation*, Memorandum Opinion and Order, 11 FCC Rcd 9394 (1996) ("*PCIA Selection Order*").

³ 47 C.F.R. § 24.253.

from the 2.1 GHz bands to other frequencies.⁴ The Commission’s policy objective is to promote the deployment of new and important Advanced Wireless Services (“AWS”), which will operate in a 90 MHz allocation of spectrum and promises to be as important to the development of wireless broadband telecommunications as PCS was to the advancement of mobile services in the 1990s. The Commission has scheduled the auction for new AWS licenses on August, 9 2006.⁵ The Commission has recognized that adopting the cost-sharing regime used for the PCS Bands in the context of AWS, will yield “many benefits,” including accommodating new wireless systems licensed by geographic areas, efficient transitioning of the operation of incumbent microwave systems, and bringing a “proven record of success” to bear on facilitating the critical new AWS opportunities.⁶

As the most effective clearinghouse in the implementation of the Commission’s cost-sharing framework for PCS, PCIA stands ready to extend its vast experience and successful track record to the AWS bands. The PCIA MWCH registered thousands of relocated links and hundreds of thousands of new PCS base stations. That work resulted in hundreds of millions of dollars in identified cost-sharing to the participants and ensured that no relocater had to bear an unfair share of the costs. And notwithstanding the unique circumstances, high stakes and complexity, there were fewer than a half-dozen disputes that ultimately had to be referred to the Commission for resolution.

⁴ *AWS Ninth Order* at ¶¶ 83, 106-107.

⁵ *Public Notice*, Auction for Advanced Wireless Services Licenses Rescheduled for August 9, 2006, FCC 06-71, Au Docket No. 06-30 (rel. May 19, 2006).

⁶ *In the Matter of Amendment of Part 2 of the Commission’s Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of new Advanced Wireless Services, including Third Generation Wireless Systems*, Eighth Report and Order, Fifth Notice of Proposed Rulemaking and Order, 20 FCC Rcd 15866 (2005) (“*AWS Fifth Notice*”), at ¶ 47; see *AWS Ninth Order* at ¶ 74.

Such experience is critical as the Commission now crafts a similar cost-sharing regime for AWS at 2.1 GHz – frequencies in which there are considerably greater challenges. At 2.1 GHz, there are nearly twice as many incumbent licensees, and the license areas for new entrants will be of three varying sizes, with one of those sizes (Cellular Market Areas) being substantially smaller than the Basic Trading Areas used in the PCS Bands. In addition, the operating parameters – including, most notably, bandwidth – vary considerably more than they did in the PCS Bands. The 2.1 GHz band also implicates cost-sharing with relocating licensees in the Broadband Radio Service (“BRS”) operating at 2.150-2.156 GHz, which could lead to a much greater number of “triggers” occurring at 2.1 GHz, *i.e.*, the threshold condition for cost-sharing obligations to arise. Given the complexity of cost-sharing in the AWS relocation effort, designating an entity with proven experience and expertise to organize and operate an effective spectrum relocation cost-sharing process is critical.

PCIA is confident that the experience and tools it developed for the MWCH can be adapted to address these challenges, and PCIA already has undertaken that process in earnest. In this proposal, PCIA seeks to establish an FCC-designated clearinghouse for the 2.1 GHz band (the “PCIA AWS Clearinghouse”). The PCIA AWS Clearinghouse will help to administer the Commission’s cost-sharing regime, and will work cooperatively with other clearinghouses, if any, that the Commission may also designate.

II. PCIA IS UNIQUELY QUALIFIED TO ESTABLISH A COST-SHARING CLEARINGHOUSE FOR BOTH FS AND BRS RELOCATIONS

PCIA has a history of working successfully with representatives of a wide variety of Commission licensees and wireless users. PCIA is highly experienced in constructing appropriate and effective technical and procedural approaches to a wide variety of new issues in novel circumstances consistent with the Commission’s framework for relocation. As mentioned,

following its designation as a PCS clearinghouse in 1996, PCIA proceeded to develop the state-of-the-art in clearinghouse operations. The PCIA MWCH registered more than 3,500 relocated links and nearly 200,000 new PCS base stations from 220 different licensees for approximately 2,050 PCS licenses. The PCIA MWCH registered relocation costs of more than \$750 million and identified approximately 13,000 cost-sharing obligations totaling over \$405 million for the participants.⁷

Such experience uniquely qualifies PCIA to establish similar operations at 2.1 GHz. The MWCH was a central component in the implementation of the cost-sharing regime for PCS. Indeed, the Commission determined that adopting the MWCH approach, with minimal refinement, “will foster a more efficient rollout of AWS and minimize confusion among parties,” thereby “serv[ing] the public interest.”⁸

The PCIA AWS Clearinghouse will implement procedures for facilitating cost-sharing of relocated incumbent fixed service (“FS”) microwave licensees in the AWS bands that closely follow the procedures it used in the MWCH. The Commission’s rules for sharing FS relocation costs with respect to the AWS bands require substantially the same information to be submitted in a prior coordination notice (“PCN”) as required for the PCS Bands, and cost-sharing obligations are triggered by the same Proximity Threshold Test applicable to the PCS Bands.⁹ Thus, PCIA’s expertise and database systems are ideally suited for this important piece of the AWS clearinghouse process.

⁷ Information regarding the PCIA PCS MWCH is attached hereto as Exhibit B. This information is also available on PCIA’s website at: http://www.pcia.com/pcia_microwave.htm.

⁸ *AWS Ninth Order* at ¶ 75.

⁹ *Id.* at ¶¶ 78-79; *see also*, 47 C.F.R. §§ 24.245-247; 47 C.F.R. §§ 24.1166-1168.

Additionally, the PCIA MWCH experience and systems are adaptable to facilitate cost-sharing transactions for relocated BRS licensees. The PCIA AWS Clearinghouse will modify the software to comport with the cost-sharing formula and triggers for BRS relocations under the Commission's rules.¹⁰ PCIA also has agreements with technical consultants with vast experience addressing interference and coordination issues, including issues relating to the BRS bands: Mr. T. Lauriston Hardin, P.E., of the engineering firm of Hardin and Associates, and Mr. Richard P. Biby, P.E., of Waterford Consultants, LLC.¹¹ These resources will provide additional engineering services, including the determination of when cost-sharing obligations have been triggered in accordance with the line-of-sight tests established by the Commission for BRS systems, if necessary.¹²

III. PCIA SEEKS NON-EXCLUSIVE DESIGNATION FOR THE PCIA AWS CLEARINGHOUSE

PCIA's unique qualifications, experience and success in administering the MWCH would certainly justify the Commission designating the proposed PCIA AWS Clearinghouse as the exclusive clearinghouse for the AWS spectrum. However, PCIA advocates the designation of multiple clearinghouses in order to promote competition for clearinghouse users to ensure maximum opportunities, benefits and choices to AWS spectrum licensees and relocated users. The Commission took such an approach with respect to the PCS Bands, with excellent results: the PCS transition was accomplished effectively, and the Commission's cost-sharing rules were implemented in an efficient manner. PCS licensees that relocated incumbents had a choice of cost-sharing service providers.

¹⁰ See 47 C.F.R. §§ 27.1182-27.1186.

¹¹ Biographies of Mr. Biby and Mr. Hardin are attached hereto as Exhibit C.

¹² *AWS Ninth Report* at ¶¶ 108-110; see also, 47 C.F.R. § 27.1184.

In 1996, PCIA and one other entity were designated as clearinghouses for the PCS Bands despite some comment that there would be little benefit to having more than one clearinghouse.¹³ However, the Commission reasoned that the existence of more than one clearinghouse would “ensure that users of clearinghouse services will have input as to how both clearinghouses operate,” and predicted that “the clearinghouse that best addresses its client’s needs will ultimately be the most successful.”¹⁴

That prediction proved both wise and accurate. Although even PCIA itself had advocated designation of a single clearinghouse, based on the MWCH experience, PCIA now believes that the public interest was best served by the existence of competitive choices. Consistent with the Commission’s experience promoting competition in a wide range of contexts, including the designation of clearinghouses for PCS cost-sharing, competition among AWS clearinghouses will promote operating efficiency, superior service, a comprehensive response to marketplace concerns, and competitive pricing. PCIA’s extensive experience with the MWCH and as a frequency coordinator demonstrates PCIA’s ability and willingness to coordinate information among multiple clearinghouses. PCIA is confident in its ability to establish an effective methodology to coordinate information regarding cost-sharing transactions among multiple clearinghouses.

IV. PCIA HAS OR WILL ESTABLISH THE NECESSARY DATABASE SYSTEMS AND STAFF FOR THE PCIA AWS CLEARINGHOUSE TO OPERATE IN AN EFFICIENT AND COST-EFFECTIVE MANNER

PCIA has analyzed the resources that will be necessary to operate the PCIA AWS Clearinghouse and has found that considerable economies can be realized by utilizing existing in-house systems and personnel. The database system that PCIA implemented for the MWCH is

¹³ See *PCIA Selection Order* at ¶¶ 20-26.

¹⁴ *Id.* at ¶ 26.

ideally suited and adaptable to the cost-sharing processes of the PCIA AWS Clearinghouse. PCIA has a programmer in-house who already is engaged in the evaluation of existing software, and PCIA is committed to implementing any modifications necessary to improve and adapt the software for the requirements of the PCIA AWS Clearinghouse. PCIA has the capability to complete the modifications to the database system on a timetable that will permit rapid initiation of the clearinghouse services after designation by the Commission.

As was the case with the MWCH, the PCIA AWS Clearinghouse will employ an electronic delivery system. The process will be automated with built-in quality checks. The electronic submission of relocation information will save both time and expense as staff members will not be required to enter the information into the database, thus eliminating potential entry errors and delays between submission of relocation data and entry into the system. In addition, with the system running error checks on the data elements, the potential for erroneous data to enter the system is minimized.

Under the PCIA AWS Clearinghouse, entities that have relocated 2.1 GHz systems (a “relocator”) will submit their relocation cost information in a standard electronic format to PCIA. Before commencing new operations, new entrants to the band will submit a PCN to the PCIA AWS Clearinghouse.¹¹ As with the previous MWCH, the PCIA software will determine when a cost-sharing obligation has been triggered and which new entrants in the AWS band are obligated to share costs with the relocater. The system will also calculate each new entrant’s share of the reimbursable costs.

The PCIA AWS Clearinghouse database will be capable of accounting for reimbursable and non-reimbursable relocation costs for FS and BRS. After a relocater submits

¹¹ A flowchart illustrating PCIA’s proposed clearinghouse cost-sharing procedure is attached hereto as Exhibit D, AWS Clearinghouse Cost-Sharing Process At-A-Glance.

the relocation cost data to the clearinghouse, the data is subject to verification against the respective limits on reimbursable costs for FS and BRS relocations set forth in the Commission's rules.¹⁵ The database will only process cost-sharing notices with respect to costs that are reimbursable. Therefore, any "premium" payments by the relocater will be excluded from the cost-sharing obligations.

Within ten days of a cost-sharing obligation triggering event, the PCIA AWS Clearinghouse will notify the appropriate new entrant of the cost-sharing obligation and will notify the relocater of a reimbursement due, including the cost-sharing amount that is owed. The relocater must invoice the new entrant to collect the reimbursement amount and notify the clearinghouse once the relocater has received the reimbursement payment.

PCIA understands the importance of impartiality and confidentiality to the clearinghouse process. A well-trained and highly competent staff is critical to the success of the PCIA AWS Clearinghouse. The PCIA AWS Clearinghouse will have its own manager who will be responsible for overseeing daily operations. The PCIA AWS Clearinghouse will hire additional full-time staff as necessary to manage the PCIA AWS Clearinghouse workload. However, in order to lower costs and increase efficiency, the PCIA AWS Clearinghouse can share certain personnel with PCIA's other activities, especially administrative support staff including finance and information technology. Of course, the PCIA AWS Clearinghouse's expense would only include the portion of the PCIA staff resources used for clearinghouse activities.

¹⁵ See 47 C.F.R. §§ 27.1164(b), 27.1180(b).

V. PCIA HAS DEVELOPED A BUSINESS PLAN AND CALCULATED THE COSTS OF THE PCIA AWS CLEARINGHOUSE BASED ON REAL-WORLD EXPERIENCE

As discussed, PCIA is a going concern that has the resources and experience necessary to create and launch the PCIA AWS Clearinghouse. Upon being selected as an AWS clearinghouse, PCIA plans to establish the PCIA AWS Clearinghouse as a non-profit subsidiary in order to ensure its neutrality. The PCIA AWS Clearinghouse will have its own by-laws and Board of Directors. PCIA, as the incorporator of the PCIA AWS Clearinghouse, will select the initial Board of Directors. The Board will establish the general policies governing the PCIA AWS Clearinghouse, but the PCIA AWS Clearinghouse will have its own dedicated staff for its day-to-day operations. The PCIA AWS Clearinghouse will have its own accounting books and records to ensure that all clearinghouse transaction fees collected by the PCIA AWS Clearinghouse subsidiary are spent appropriately on clearinghouse activities. In addition, the PCIA AWS Clearinghouse will be audited each year by an independent accounting firm in accordance with Generally Accepted Accounting Practices for non-profit associations.

Based on its previous successful experience with the MWCH, PCIA has developed a budget for administering the cost-sharing process in the PCIA AWS Clearinghouse based on realistic estimates of expenses the PCIA AWS Clearinghouse will likely incur in the initial years of operation. PCIA has the ability to minimize the start up costs by leveraging PCIA's investments in hardware and software that were used by the MWCH.

PCIA estimates the operating expenses of the PCIA AWS Clearinghouse will be in the range of approximately \$500,000 to \$600,000 for each of the first three years of operation. No later than the end of the third year of operation, the PCIA AWS Clearinghouse will conduct a complete review of its revenues and expenses to determine whether or not transaction fees

charged to clearinghouse participants should be revised. Once the initial review is completed, the PCIA AWS Clearinghouse will conduct an annual review thereafter.

Until the frequency of transaction fee payments can generate sufficient funds to support the administrative costs, PCIA will provide initial funding for the PCIA AWS Clearinghouse. PCIA presently anticipates that the PCIA AWS Clearinghouse will charge an initial transaction fee of \$1,000 to clearinghouse reimbursement beneficiaries to cover the PCIA AWS Clearinghouse costs. PCIA's estimated initial transaction fee for the PCIA AWS Clearinghouse reflects PCIA's extensive MWCH experience, which reduces new start-up costs and also provides a basis for calculating a realistic projection of costs. Once operation of the PCIA AWS Clearinghouse is underway and there is more definitive knowledge regarding the number of cost-sharing transactions the PCIA AWS Clearinghouse is likely to handle, the initial transaction fee may be adjusted as necessary.

The PCIA AWS Clearinghouse will collect the transaction fee from relocating parties receiving a notice of a cost-sharing reimbursement. Once a cost-sharing obligation has been triggered, the PCIA AWS Clearinghouse will send an invoice to the relocating party receiving its first reimbursement notice on a particular link. The relocating party will only be charged one transaction fee per link. In some cases, the PCIA AWS Clearinghouse may identify multiple cost-sharing reimbursements for an entity on the same link, however, the reimbursed entity will only be charged a transaction fee for the first triggered obligation on that link. A transaction fee is charged to each party that is entitled to reimbursement on a particular link. The PCIA AWS Clearinghouse will charge transaction fees in this manner for both FS and BRS relocating parties.

VI. PCIA RECOGNIZES THE IMPORTANCE OF IMPARTIALITY AND OBJECTIVITY IN ADMINISTERING THE PCIA AWS CLEARINGHOUSE

PCIA anticipates no difficulty ensuring that the PCIA AWS Clearinghouse will be administered objectively and impartially. First, as a general proposition, PCIA's overall associational focus on wireless industry matters means that PCIA has no reason to favor any particular constituency (*e.g.*, carrier, microwave or BRS operator) with respect to clearinghouse matters. Second, as mentioned above, PCIA will establish the PCIA AWS Clearinghouse as a subsidiary to further ensure the impartiality and objectivity of clearinghouse operations. Third, PCIA has industry credibility and an unblemished track record over the entire period of MWCH operations that underscores its commitment to advancing these objectives – the Commission, licensees and the public can be confident, based on this experience, that the PCIA AWS Clearinghouse will be a reliable and fair administrator of AWS relocation matters. Finally, the creation of multiple clearinghouses, as mentioned above, will provide additional “checks and balances” in the cost-sharing process and also will be a force for ensuring neutrality and impartiality among clearinghouses.

VII. PCIA WILL ENSURE THE CONFIDENTIALITY OF ANY INFORMATION SUBMITTED TO THE PCIA AWS CLEARINGHOUSE

PCIA understands the sensitive, proprietary and competitive nature of the information for which the PCIA AWS Clearinghouse will be responsible, as well as the importance of storing such information in a safe and secure manner. Upon receipt by the PCIA AWS Clearinghouse, data will be verified, processed, and maintained (including back-up) in a secure manner, and confidentiality of such information must be maintained even after the cost-sharing obligations have ceased. The PCIA AWS Clearinghouse will employ measures to ensure that relocation cost and cost-sharing information is restricted to only those entities that require it for legitimate cost-sharing purposes.

The PCIA AWS Clearinghouse will undertake appropriate measures to protect the confidentiality of data submitted by cost-sharing participants and relocating entities. The PCIA AWS Clearinghouse will collect only the minimum amount of information necessary to accomplish the Commission's directed cost sharing. Further, information submitted to the PCIA AWS Clearinghouse will not be made available generally to its cost-sharing participants. Instead, only the information relevant to an individual cost-sharing transaction will be provided to the entities that require such information to evaluate and/or support their cost-sharing obligations. Additionally, the PCIA AWS Clearinghouse will enter into a nondisclosure agreement for the benefit of each participating entity.

As discussed above, the PCIA AWS Clearinghouse will implement a database system that will require entities to submit relocation cost information electronically. The proposed network will employ Cisco firewall protection, and access to the system will only be granted to the appropriate staff. Further, all personnel of the PCIA AWS Clearinghouse, PCIA and any contractors with any access to the PCIA AWS Clearinghouse functions and processes, including the database, will be subject to confidentiality agreements.

The PCIA MWCH adopted effective confidentiality policies and procedures. The PCIA AWS Clearinghouse will review and update such policies and procedures as appropriate for the AWS context. Initially, the PCIA AWS Clearinghouse will be set up within space at PCIA's offices and will be provided all necessary office equipment and support. This space and the systems within it are not accessible to the public and are maintained with appropriate security measures that will meet the PCIA AWS Clearinghouse's needs. Further, information in the PCIA AWS Clearinghouse databases will be backed-up and stored in an off-site facility as an added security measure.

VIII. THE PCIA AWS CLEARINGHOUSE CAN BEGIN OPERATIONS PROMPTLY UPON FCC APPROVAL

Because of its existing infrastructure, staff and experience with the MWCH, PCIA believes any necessary software modifications can be completed for the PCIA AWS Clearinghouse within 60 days. PCIA has already begun evaluation of the PCIA MWCH software to determine the modifications necessary in order to conform to the AWS cost-sharing requirements. Because PCIA is able to provide temporary staffing with MWCH experience immediately, PCIA is confident that the PCIA AWS Clearinghouse can initiate operations promptly upon FCC approval.

IX. THE PCIA AWS CLEARINGHOUSE WILL FACILITATE THE RESOLUTION OF ANY DISPUTES REGARDING COST-SHARING OBLIGATIONS

PCIA does not anticipate disputes among cost-sharing parties to be significant. Disputes were not prevalent during the MWCH operation. Additionally, PCIA suggested a number of improvements in its comments in this docket that would reduce the possibility of disputes significantly in the AWS clearinghouse. Nonetheless, if any disputes occur, PCIA has the capability and resources necessary to facilitate dispute resolution among participants. PCIA has a long history of resolving conflicts in the context of the MWCH, as well as in its role as a frequency coordinator. PCIA's policy of remaining impartial in dispute resolutions involving spectrum management issues has led to outcomes that are both in the public interest and facilitate satisfactory solutions for all parties. In addition, the successful resolution of most disputes arising among MWCH participants provides directly relevant experience for resolving any cost-sharing disputes that may arise among AWS cost-sharing participants.

PCIA's procedures for resolving disputes arising between participants of the PCIA AWS Clearinghouse begin with working toward resolution with the parties on an informal basis. Disputes would only be submitted to the Commission if other dispute resolution measures

are unsuccessful. The PCIA MWCH had only approximately five instances in which disputes required FCC involvement. Taken in the context of the large number of cost-sharing transactions that the PCIA MWCH oversaw, the small number of disputes referred to the Commission underscores PCIA's ability to assist parties in resolving cost-sharing disputes successfully in the first instance.

Based on PCIA's prior experience with the MWCH, PCIA stands ready to implement a dispute resolution process that has had proven success. The PCIA AWS Clearinghouse would apply the same multi-tiered approach used by the PCIA MWCH. All disputes in connection with a cost-sharing obligation must be reported to the PCIA AWS Clearinghouse within 30 days of notification of the obligation. The PCIA AWS Clearinghouse would work with the disputing parties to determine if the conflict can be resolved on an informal basis. If the parties cannot come to a quick resolution, the PCIA AWS Clearinghouse would strongly encourage the parties to utilize alternative dispute resolution ("ADR") methods, such as mediation and/or arbitration to resolve their differences. Based on PCIA's broad experience resolving disputes, PCIA has the knowledge and resources to help the parties find appropriate organizations and individuals to serve as mediators and arbitrators. Because the Commission's rules require that disputing parties submit to the PCIA AWS Clearinghouse appropriate documentation, such as independent third-party appraisals, in support of their positions, it is likely that most disputes not resolved informally could be resolved through such ADR methods.

The Board of Directors of the PCIA AWS Clearinghouse will review the dispute resolution policies and will examine those policies from time to time to ensure that they are effective. However, the Board will play no role in the actual dispute resolution process. Instead, disputes will be handled by the PCIA AWS Clearinghouse staff and dispute resolution experts.

X. CONCLUSION

For the foregoing reasons, PCIA requests that the Wireless Telecommunications Bureau formally authorize PCIA to establish an AWS clearinghouse to administer the relocation cost-sharing plan for the AWS 2.1 GHz band. PCIA will be pleased to supplement or amplify on this proposal as requested by the Bureau.

Respectfully submitted,

PCIA – THE WIRELESS
INFRASTRUCTURE ASSOCIATION

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EXHIBIT A

CERTIFICATION OF PCIA – THE WIRELESS INFRASTRUCTURE ASSOCIATION

I, Michael Fitch, hereby certify on behalf of PCIA – The Wireless Infrastructure Association (“PCIA”), to the following:

- PCIA is a not-for-profit organization meeting the requirements of Internal Revenue Code Section 501(c). PCIA intends to retain its not-for-profit status, as well as the not-for-profit status of any affiliated entity that may conduct clearinghouse operations, during the term of its operations.
- Should the Wireless Telecommunications Bureau decide to designate more than one clearinghouse manager to administer the 2.1 GHz cost-sharing plan in addition to PCIA, PCIA has the capability and willingness to work with other clearinghouse managers, as described in PCIA’s Clearinghouse Proposal filed herewith.

/s/ Michael T.N. Fitch

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EXHIBIT B

PCIA PCS MICROWAVE CLEARINGHOUSE INFORMATION

[Please click here to read the press release regarding the Microwave Clearinghouse's donation to the Tsun](#)



A MODEL OF SELF REGULATION

The PCIA Microwave Clearinghouse is a unique success story, as proven by its positive financial position and its world-class reputation. Representatives from Australia, Canada, France, Taiwan, and Japan have studied the PCIA Microwave Clearinghouse operation so that they may establish similar processes in their countries. In the United States, the FCC and PCS carriers hold up the PCIA Microwave Clearinghouse as a prime example of the wireless industry regulating itself.

Overview of the PCIA Microwave Clearinghouse

Created as a cooperative venture in 1996 by PCS carriers working under the PCIA umbrella, the PCIA Microwave Clearinghouse ensures fair and equitable cost-sharing in the 1.85-1.99 GHz PCS band. The Clearinghouse provides the database service and intellectual expertise that has resulted in more than \$400 million identified cost-sharing revenue to its participants.

The PCIA Microwave Clearinghouse tracks money owed from one PCS carrier to another. In 1995, there were 4,400 active microwave paths on PCS spectrum. In most cases, each microwave path encumbered more than one PCS entrant. After the PCS auctions, carriers were to pay money to relocate microwave systems out of the band under FCC transitional rules. Relocation costs average \$220,000 per microwave path. The problem was that, in most cases, a carrier paying for a relocation would be removing a barrier for a direct competitor in the same market. A cost-sharing Microwave Clearinghouse concept was born to distribute the burden of microwave relocation equitably and to promote a more rapid buildout of PCS.

Click on the links below for more information on the FCC's rules regarding cost sharing for microwave relocation:

- [1996 First Report and Order/Further Notice of Proposed Rulemaking \(1996\)](#)
 - [Second Report and Order \(1997\)](#)
 - [Memorandum Opinion and Order on Reconsideration \(2000\)](#)
-

A Nonpartisan Service to the PCS Industry

A subsidiary of PCIA, the PCIA Microwave Clearinghouse is a non-profit entity, designed to encourage wide

participation by the PCS industry. To ensure fairness, any PCS company that either provides funding or pays a transaction fee becomes a member of the PCIA Microwave Clearinghouse. Membership benefits include participation in the election of the board of directors, who set policy around technical and procedural issues associated with relocation cost-sharing. AT&T, Cingular, Cricket, Edge, Leap, Qwest, Sprint PCS, T-Mobile, UTAM, and Verizon are represented on the PCIA Microwave Clearinghouse Board of Directors.

The Choice of the PCS Industry

The PCIA Microwave Clearinghouse has registered more than 3,500 relocated links and nearly 200,000 base stations. All major PCS carriers participate in the PCIA Microwave Clearinghouse. They choose to do so because of PCIA's history of leadership and support for the microwave relocation concept as well as the Clearinghouse's reputation for fairness and unwavering commitment to confidentiality. The Clearinghouse offers free mediation-oriented assistance to all registrants in the resolution of cost-sharing disputes. In addition, the Clearinghouse will release information only to those entities who require it to meet their cost-sharing obligations and as required by the FCC.

For more information on the **PCIA Microwave Clearinghouse** please call 800.759.0300 or e-mail MWCH@pcia.com.



OVERVIEW

Ensure Reimbursement of Your Microwave Relocation Cost by Registering Links and Base Stations with the PCIA Microwave Clearinghouse

In making spectrum available for PCS carriers, the Federal Communications Commission requires that existing microwave systems operating in the 2 GHz band be relocated to operate on another spectrum. This "relocation" could involve anything from retuning or retrofitting of existing microwave radios to operate on a different spectrum, to the physical removal of dishes from towers and rooftops. As the PCS entrant that will now be occupying that spectrum, your company will be making a substantial investment in the relocation of the incumbent microwave system. While this investment will enable your PCS company to enter the market rapidly and establish your network, it isn't a cost you should bear alone. As new entrants come into the market in the next few years, they will not have to contend with the relocation of microwave.

This is why PCIA, working with the PCS industry, developed a fair, confidential and impartial registration and notification service to ensure that microwave relocation costs were fairly allocated among benefitting entities. Our belief was that the rapid relocation of microwave systems would clear the way for PCS networks. In 1996, the FCC officially appointed PCIA to serve as a cost-sharing Clearinghouse for PCS microwave relocation — the nonprofit PCIA Microwave Clearinghouse.

Simply put, the Clearinghouse lets you register your microwave relocation costs to ensure notification of all cost sharing opportunities. As new entrants come into the market in the following years and establish their networks, they must share in your earlier costs. Wherever their network overlaps the relocated links a cost-sharing obligation is triggered. They are then required by the FCC to reimburse a proportion of your microwave relocation costs.

By registering with the PCIA Microwave Clearinghouse, you can ensure that your investment is equally shared by new entrants into the market for years to come.

The PCIA Microwave Relocation Clearinghouse

A non profit entity, the PCIA Clearinghouse was developed in conjunction with a large consortium of the PCS industry. The Clearinghouse was created to help your PCS company realize the benefit of cost sharing in an efficient and expeditious manner. Fully authorized by the FCC, the Clearinghouse is here to meet your needs.

There is No Charge to Register Your PCNs or Relocated Links

The PCIA Microwave Relocation Clearinghouse, a nonprofit entity, does not charge for the filing of your PCN (Prior Coordination Notice) or relocated links. A transaction fee is only charged when a cost-sharing obligation is triggered by a new entrant and you receive notification of reimbursement for your relocation costs. The Clearinghouse can assist you in recouping your costs up to \$250,000 per link, plus up to an additional \$150,000 if a new or modified tower is required.

Our Highly Skilled Staff is Available to Assist You

The PCIA Clearinghouse has a knowledgeable and courteous staff and resources to respond to your inquiries and assist you with registration. Our prompt and accurate notification service frees you from having to track cost-sharing obligations and opportunities. When a new entrant triggers a cost-sharing obligation, you will be contacted by PCIA Clearinghouse staff members, who will work with you step-by-step to reimbursement.

Proximity Threshold Tests

When you register your links with the Clearinghouse, PCIA will automatically perform a Proximity Threshold Test (PTT) at no charge to you whenever a new entrant sets up a network in your area. This FCC-required test evaluates if a PCS' base stations overlap relocated microwave links. When an overlap occurs, the cost sharing obligation is triggered. There is no need for you to invest in special software or outside firms; the Clearinghouse will automatically provide this service for you.

All Information is Strictly Confidential

The Clearinghouse will only release information to those entities who require it to meet their cost-sharing obligations and as required by the FCC. PCIA has a longstanding record of maintaining confidentiality and neutrality.

A Nonpartisan Service to the PCS Industry

PCIA's Clearinghouse structure has been designed to encourage wide participation by the PCS industry. To ensure fairness, any PCS company that either provides funding or pays a transaction fee becomes a member of the Clearinghouse. Membership allows you to participate in the election of the Board of Directors, which sets Clearinghouse policy.

Fast, Fair and Free Resolution of Disputes

PCIA will provide free assistance to all Clearinghouse registrants in the resolution of cost-sharing disputes. We will ensure fair and objective mediation, and work towards a fast and acceptable settlement.

The Choice of the PCS Industry

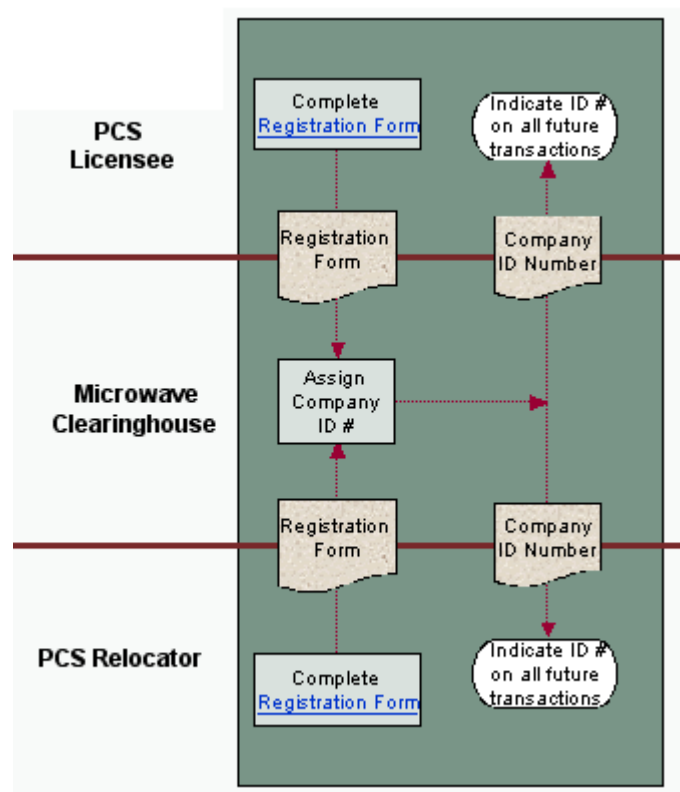
Clearly the industry leader, the PCIA Clearinghouse has already registered over 3,000 relocated links and

thousands of base stations. PCS companies choose the Clearinghouse because of our reputation for fairness, our history of leadership and support for the microwave relocation concept, and our unwavering commitment to helping PCS companies build their networks quickly and effectively.

For more information on filing relocation agreements and Prior Coordination Notices (PCNs) with PCIA's Microwave Clearinghouse, please contact us at 800.759.0300 or e-mail MWCH@pcia.com.

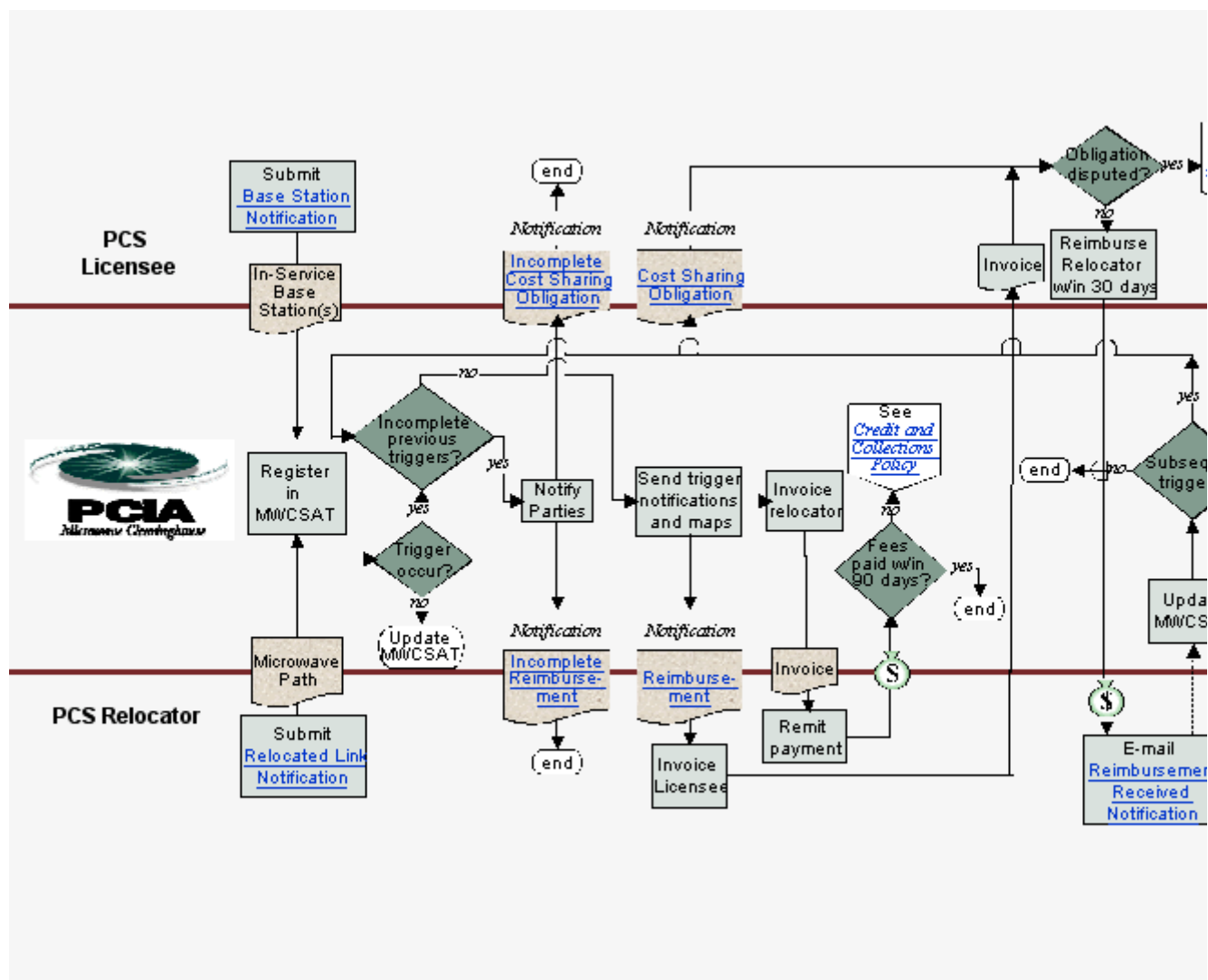


REGISTRATION PROCESS AT-A-GLANCE





COST-SHARING PROCESS AT-A-GLANCE





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What is PCIA's Microwave Clearinghouse?

The PCIA Clearinghouse operates a fair, efficient, secure, and risk-free service that enables companies to recover costs associated with microwave relocation in the 1.85 to 1.99 GHz band.

Companies that have spent money relocating microwave systems out of the band register these costs with the Clearinghouse, and the Clearinghouse notifies them of reimbursement opportunities due them under FCC rules.

The Clearinghouse acts as a secure storehouse for two different sets of information. The first set contains

the technical and cost data of relocated microwave links – carriers register link data after negotiating with incumbent microwave users and removing the link from the PCS band. Incumbent microwave entities may also register costs if they self-relocate.

The second set of data contains the technical information of PCN (Prior Coordination Notice) site data. All PCS carriers are required to submit site data to the Clearinghouse on the date they file PCNs. As of May 2003, the Clearinghouse has over 3,500 links registered and over 305,000 PCN sites on file. The PCIA Clearinghouse receives frequent updates to both data sets – as companies register links and submit site data. Whenever new link or site information is received at the Clearinghouse, a sophisticated computer-driven process compares the two database sets to determine cost-sharing obligations.

How it works is this: Each link is plotted both by frequency and geography. A Proximity Threshold rectangle is generated from the endpoint plots of the link. The dimensions of the rectangle are determined by FCC Rules: 48 kilometers wide, and extends 48 kilometers from the back end of each endpoint. Any co-channel PCN sites that fall into a link's Proximity Threshold rectangle are considered to have triggered a cost-sharing obligation. The FCC calls running this process a "proximity threshold test," and the event (site inside the box) is called a "trigger."

Once a trigger has occurred, and the Clearinghouse determines a cost-sharing obligation, notices are sent to both parties within ten business days. The obligated party is sent an Obligation Notice. The party that is due the obligation is sent a Reimbursement Notice. If cost information is available, the notices will contain an assessment of the dollar amount that the triggering party is obligated to pay the relocater. The Clearinghouse uses an FCC formula in calculating the obligation amount.

Upon receipt of the Clearinghouse notices, FCC rules state that the two parties must negotiate payment of the cost-sharing obligation within 30 days.

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When is my company required to submit PCN site data?

Companies should submit base station site data to the Clearinghouse on the same date it submits its PCN (Prior Coordination Notice). A description of the PCN structure and procedure can be found at this web site: http://www.nsma.org/wg_20.html

Based on the NSMA working group and FCC Rule 24.237, the standard date for submitting PCN data is 30 days prior to activating base station sites at commercial power levels and duration of signal. If a carrier delays filing its site information the Clearinghouse reserves the right to backdate the triggered obligation for purposes of determining depreciation.

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What site data does my company need to send?

The Clearinghouse requires minimal site data – the latitude, longitude, frequency block, and identification numbers. This data is sent to the PCIA Clearinghouse using an Excel spreadsheet. [Click here to view data](#)

[formats for submitting link and site information.](#)

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When is my company required to submit microwave link data?

No company is ever required to register link information. However, companies that do not register link information cannot be reimbursed for costs involved in relocation.

Because of the depreciation factor in the cost-sharing formula, there may be benefit in registering links as early as possible. (Depreciation subtracts roughly \$1,000 every month from a first-trigger pro-rata obligation for a \$250,000 link.)

Registering links with the PCIA Clearinghouse is risk-free. There is no charge for registering link information with the Clearinghouse.

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What does incomplete link mean?

Relocators may file link data without complete costs. Often, it is in the best interest of the relocater to file incomplete link data, because filing as soon as possible can limit depreciation in the event of an immediate trigger.

The relocater files all technical information without costs, and indicates the link is incomplete with an "I" in the appropriate field. The Clearinghouse will notify parties when triggers occur to incomplete links. These notices will not contain costs, but serve to inform parties of the obligation and stop the increase of depreciation in pro-rata situations.

Relocators must notify the Clearinghouse with completion data immediately after the costs have been determined. The relocater should notify the Clearinghouse of completion before issuing invoices to an obligated party.

Upon receipt of completion data via email, the Clearinghouse will issue regenerated obligation notices, with the Clearinghouse assessment of the obligation amount.

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What is the PCIA Transaction Fee?

The current PCIA Clearinghouse Transaction Fee is \$1,000 per link.

The Clearinghouse is non-profit and the transaction fees fund the operation. The transaction fee is subject to change based on annual review by the Clearinghouse Board of Directors.

A company may only be charged one transaction fee per link. In some cases, the Clearinghouse may

identify multiple cost-sharing obligations for the same link. The party will only be charged a transaction fee for the first triggered obligation.

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When does the Clearinghouse notify companies of cost-sharing obligations?

The Clearinghouse notifies both parties within ten business days of receipt of triggering site or link data.

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How does the Clearinghouse determine whether the obligation is 100% or Pro-Rata?

The Clearinghouse uses the matrix set forth in the FCC Rules:

	Fully within Relocator's Block	Partly within Relocator's Block	Outside Relocator's Block
Both Endpoints inside Relocator's MTA/BTA	Pro-rata reimbursement under the cost-sharing formula	Pro-rata reimbursement under the cost-sharing formula	100 percent reimbursement (up to the cap)
One Endpoint inside Relocator's MTA/BTA	Pro-rata reimbursement under the cost-sharing formula	Pro-rata reimbursement under the cost-sharing formula	100 percent reimbursement (up to the cap)
No endpoints inside Relocator's MTA/BTA	100 percent reimbursement (up to the cap)	100 percent reimbursement (up to the cap)	100 percent reimbursement (up to the cap)

In the above table, the blocks that have "Pro-Rata" indicate that the relocater has benefited from the relocation. Blocks that have "100 percent" indicate that the relocater has not benefited from the relocation.

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When does my company have to pay a PCIA Transaction Fee?

The Clearinghouse issues a transaction fee invoice via e-mail when reimbursement notices have been distributed. Payment of the transaction fee is due within 30 days of receipt.

The 30-day time period coincides with the FCC-directed 30-day window in which parties should negotiate payment of a cost-sharing obligation. In some cases, parties may prolong negotiations beyond the 30-day window, but the PCIA transaction fee is still due within 30 days of receipt.

If an obligation is found to be not payable by the obligee within 180 days of the trigger date (i.e.: due to

erroneous site or link data filed with the Clearinghouse, or obligee company going out of business), the company can request that the PCIA transaction fee be voided. In such cases, the money paid for the transaction fee will be refunded or credited for a future transaction fee.

Please reference the Clearinghouse Credit and Collections policies for additional details.

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How is a PCS Block determined to be co-channelled to a link?

On July 21, 2001, the Clearinghouse Board of Directors approved the following criteria for determining whether a link is co-channel with a PCS Block:

The Clearinghouse will use a differential 5 MHz / 10 MHz co-channel test for registered links, based on the FCC Operational Fixed Plan at 1850-1990 MHz. In short, the FCC Operational Plan allocates a 5 MHz bandwidth to channels that end in a zero (i.e. 1870 MHz, 1980 MHz), and allocates a 10 MHz bandwidth to channels that end in a five (i.e. 1875 MHz, 1985 MHz). Tables of the specific bandwidths allocated for microwave links can be found in FCC Rule Section 101.147(c).

If the Operational Fixed Plan bandwidth of a link's receive frequency overlaps the PCS Block (or licensed bandwidth of a disaggregated licensee), the link is determined to be co-channel as described in FCC Rule Section 24.247(a)(1).

Sec. 24.247

Triggering a reimbursement obligation.

(a) Licensed PCS. The clearinghouse will apply the following test to determine if a PCS entity preparing to initiate operations must pay a PCS relocater or a voluntarily relocating microwave incumbent in accordance with the formula detailed in Sec. 24.243:

(1) All or part of the relocated microwave link was initially co-channel with the licensed PCS band(s) of the subsequent PCS entity;

Sec. 101.147 (c)

(c) 1850-1990 MHz. (1) 10 MHz maximum bandwidth.

Standard Paired Frequencies, Not Universal

<u>Transmit (receive) (MHz)</u>	<u>Receive (transmit) (MHz)</u>
1855	1935
1865	1945
1875	1955

1885	1965
1895	1975
1905	1985

Unpaired Frequencies

1915\1\
1925\1\

\1\ Available for systems employing one-way transmission.

(2) 5 MHz maximum bandwidth.

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Standard Paired Frequencies, Not Universal

<u>Transmit (receive) (MHz)</u>	<u>Receive (transmit) (MHz)</u>
1860	1940
1870	1950
1880	1960
1890	1970
1900	1980

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What about spectrum disaggregation and geographic partitioning?

The Clearinghouse Board of Directors approved specific guidelines and procedures regarding these issues.

[Click here to view the Disaggregation Guidelines and Procedures.](#)

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How does the cost-sharing formula work in Pro Rata situations?

The Clearinghouse uses the FCC Formula found in Rule Section 24.243 to determine the obligation amount. Simply it is:

$C/N \times D$

C = Costs of the link reported to the Clearinghouse (up to the caps)

N = Number of benefiting licensees to the relocation

D = Depreciation (120-m/120)

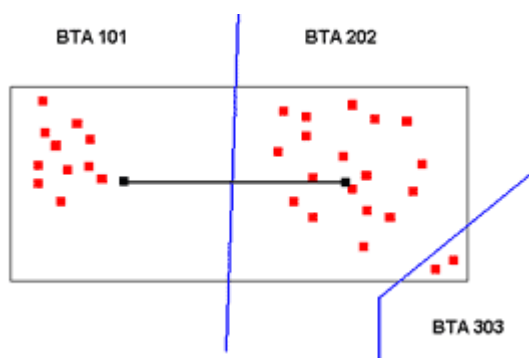
Depreciation is calculated in the following manner: First the Clearinghouse determines the number of whole months from the link agreement date to the notification date. (Examples: 12/01/98 to 12/02/99 is twelve months. 12/01/98 to 11/30/99 is eleven months.) Next, that number is subtracted from 120. (The total number of months in the 1995-2005 cost-sharing period). Then the result is divided by 120.

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What is a multiparty link?

Prior to actual relocation, companies may agree to share costs in relocating a link. This is called a multiparty relocation. The Clearinghouse records the members of the multiparty in the link record.

1. Benefit from the relocation will be determined for each member of the multiparty agreement at the date of the relocation. Benefit will be determined at the markets that contain the link endpoints and any PCN sites belonging to the members that penetrate the Proximity box in markets that do not contain the link endpoints. For some links, members of multiparty may be considered to benefit multiple times.
2. If none of the members of a multiparty link can be considered as a beneficiary to the relocation, then the first obligation triggered will be 100%. If any of the members of the multiparty can be considered a beneficiary of the relocation, then all subsequent triggers are considered pro-rata.
3. In pro-rata cases, a multiparty is considered collectively as one licensee in the cost-sharing formula. In other words, if the multiparty is determined to have benefited from two or more licenses, the N number in the cost-sharing formula will be 1.
4. If a multiparty member assumes a co-channel license after the relocation date and deploys sites inside the proximity box, the multiparty member's sites will trigger the link. If trigger results in an obligation, the N number will increase.



In the above diagram, consider a multiparty between Companies X, Y, and Z. Company X holds the BTA/101 license, Company Y holds the BTA/202 license, and Company Z doesn't hold a license anywhere near this link. The BTA/303 license triggers the link with two sites.

Both Company X and Y are considered beneficiaries to the relocation, so the obligation is pro-rata. The

multiparty is treated as one entity in the cost-sharing formula, so BTA/303 is obligated Costs/2 with depreciation. If, in this example, the combined costs were \$250,000, and there were 24 months depreciation, BTA/303 would be obligated \$100,000 to the three multiparty members. (The three multiparty members to decide how to split up the \$100,000)

Companies that enter into multiparty agreements to relocate links can file link information separately or jointly with the Clearinghouse.

For example, Company A and Company B decide to split costs of relocating an incumbent. The total combined cost is \$250,000. Company A may register link data with \$125,000 and Company B may register \$125,000. Both companies notify the Clearinghouse of the multiparty status and identify the multiparty members at time of filing. The Clearinghouse will notify all triggering obligations normally. Filing separately provides an immediate and equitable method of disbursing funds through a multiparty.

Note: When filing separately, companies cannot combine costs that would exceed the \$250,000 Equipment and \$150,000 Tower caps set by the FCC.

The multiparty group may also file jointly, with only one company registering link data. For example, Companies C, D, and E enter into a multiparty agreement. Only Company C registers link data, with costs of \$250,000. Company C identifies the multiparty, and lists the members when registering with the Clearinghouse. The Clearinghouse handles any triggered obligations normally, and sends "CC" copies of the notification letters to all multiparty members. Company C handles the subsequent disbursement of funds through the multiparty. Filing in this manner is preferable to multiparties who have already settled in a cash agreement amongst themselves, or a large multiparty that desires to avoid multiple Clearinghouse transaction fees.

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What is an immediate trigger?

A relocater may receive an immediate trigger to a link from previously filed PCN sites.



Example: In the above drawing, the link is depicted with the proximity threshold box. Company A deploys sites that do not interfere with the link, therefore Company A is not forced to relocate it. Company A could have several technical reasons for non-interference: they could be using a smaller portion of the available spectrum in the licensed block, or their sites could be operating at reduced power, or they could have employed shielding to the antennas. Company A PCNs the sites in 1996, filing site data with the Clearinghouse on 11/26/96.

Company B subsequently plans to deploy full-block sites at full power and is forced to relocate the link. Company B negotiates with the incumbent, getting an agreement date of 7/1/99.

Company B registers the link with the Clearinghouse on 7/4/99.

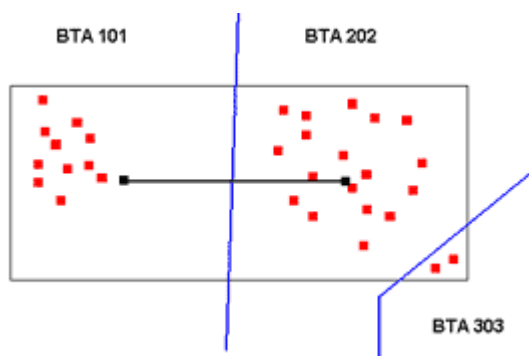
The Clearinghouse receives Company B link data, and it immediately triggers a pro-rata obligation from Company A. Company A is now considered to be a subsequent beneficiary of the relocation per FCC Rules 24.239 and 24.247. Even though company A's sites did not originally interfere with the link, Company B's relocation now allows Company A to expand its frequency use, increase levels of power, or remove shielding.

The link's agreement date of 7/1/99 is within one month of the 7/4/99 trigger date, so there is zero depreciation on the triggered obligation. If the link was registered with \$250,000 in costs, Company A's obligation would be $\text{Costs}/2 = \$125,000$.

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How does the Clearinghouse handle several licensees involved on the same link?

The Clearinghouse recognizes each license as a potential trigger/reimbursable entity to a link:



Using the above diagram, there are several scenarios:

Example 1. The link is a C/F link. The relocater holds the C/101 and C/202 licenses. The trigger occurs when the C/303 licensee reports the two sites to the Clearinghouse. The relocater is a beneficiary to the relocation...in this case twice. Both C/101 and C/202 are counted in the cost-sharing formula, so that the triggering licensee is obligated $\text{Costs}/3$ with depreciation. If the link was reported at \$250,000, and one year had passed, the obligation would be $\$250,000/3 \times (120-12)/120 = \$75,000$.

Example 2. The link is a C/F link. The relocater holds the C/303 license. Both endpoints are outside the relocater's BTA. FCC Rules say that the relocater is due 100% reimbursement. A trigger occurs when the C/202 licensee reports sites to the Clearinghouse. The Clearinghouse notifies the C/202 licensee of its obligation to the relocater. If the link was reported as \$250,000, the C/202 licensee would be obligated to pay \$250,000 to the relocater. Once C/202 pays its obligation, the rights of the link transfer to the C/202

licensee.

Now the C/303 license triggers with the two sites. The C/303 license was the relocater, but now rights have transferred to the C/202 license. This trigger can only occur after the rights have transferred to C/202. The sites will trigger on the date of the transfer of rights (if the two sites were previously filed and on record with the Clearinghouse) or the sites will trigger when C/303 subsequently files the sites with the Clearinghouse. C/303 would be obligated to C/202 pro-rata Costs/2 with depreciation.

The C/101 licensee triggers next and would be obligated Costs/3 with depreciation, splitting that total into two payments, one going to C/303, and the other going to C/202. Since this is a C/F link, there are three more potential triggers left in the F Block, and they would be obligated Costs/4, Costs/5, Costs/6 at they trigger.

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How does the Clearinghouse process reimbursement for passive repeaters?

Passive repeaters are to be registered to the Clearinghouse as two separate records. The first record contains data (call signs, latitude, longitude, frequency, etc) for the path from first node to the passive repeater. The second record contains data for the path from the passive repeater to the second node.

The Clearinghouse will determine cost-sharing obligations normally for these two separate link records. The proximity box shall be applied to each link individually.

The exception for passive repeaters is that the FCC-established caps for reimbursable costs will be applied to combined registered costs for both halves of the passive repeater. In other words, the Clearinghouse will set a limit of \$250,000 equipment and \$150,000 tower costs for the passive repeater. We suggest that costs be split evenly between the two link records that comprise a passive repeater. (Example: A relocater spends \$250,000 equipment and \$100,000 tower costs to relocate a passive repeater. The relocater files two separate link records with the Clearinghouse to identify the passive repeater, identifying them as Link # 202Pa and Link # 202Pb. Under each link record, the relocater registers costs of \$125,000 equipment costs and \$50,000 tower costs.)

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How does the Clearinghouse handle offshore links?

The Clearinghouse processes cost-sharing for offshore links consistent with its policies and procedures, considering the offshore area as being similar to a FCC-auctioned market to determine 100% vs pro-rata. (see How does the Clearinghouse determine whether the obligation is 100% or Pro-Rata? Above.) If both link endpoints are in the offshore area, the first site triggers a 100% obligation to the relocater. If the first triggering site belongs to the relocater, it is considered a self-trigger, and all subsequent triggers will generate pro-rata obligations.

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When can carriers seek reimbursement?

Carriers ordinarily must satisfy all obligations on a specific link before seeking reimbursement. Carriers may seek reimbursement in cases where they:

1. Have satisfied at least one of their obligations for the specific link (and received the relocater's documentation of costs);
2. Have contacted via email or letter all other carriers to whom they are obligated for the specific link and have waited 30 days for an invoice; and
3. Are not involved in a dispute regarding the specific link before the Clearinghouse.

This policy change was discussed at the 2/26/04 Working Group meeting and was approved by the Microwave Clearinghouse Board of Directors on that same day.

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How does the Microwave Clearinghouse handle cost-sharing in spectrum leasing situations?

The FCC adopted rules that permit licensees to lease spectrum to third parties. A copy of the FCC's original order can be found [here](#). Licensees permitted to lease spectrum include PCS licensees subject to the FCC's microwave cost-sharing rules. Because the FCC's spectrum leasing order did not explicitly address and allocate responsibility for cost-sharing filings and payments between the lessor and the lessee, the Microwave Clearinghouse (MWCH) filed an *ex parte* letter in the reconsideration proceeding on the spectrum leasing order suggesting administrative procedures for lessor and lessee cost sharing, and recommending the voluntary use of such procedures pending clarifications by the FCC. A copy of the MWCH letter can be found [here](#).

The FCC has now issued a Second Report and Order on spectrum leasing that addresses, among other things, the cost-sharing obligations of lessors and lessees. This order can be found [here](#). The FCC order makes it clear that irrespective of spectrum leasing, the licensee remains obligated for any cost-sharing incurred on its licensed spectrum. That means that any construction undertaken by a lessee will trigger an obligation by the licensee/lessor. The order indicates that lessors and lessees will not trigger obligations with respect to each other. In other words, that those actions are not similar to partitioning and disaggregation. Lessors and lessees remain free to contractually agree to sharing responsibility in a different manner, but the FCC rule itself imposes exclusive liability on the licensed entity.

Accordingly, if a lessor and lessee agree that the lessee will file PCNs for the lessee's construction activities, the lessee PCNs should utilize the ID associated with the licensee/lessor.

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What is Sunset?

Sunset is the term the FCC uses to describe the termination of its rules for microwave relocation and cost-

sharing in the 1850-1990 MHz band. The specific FCC Rule discussing sunset of cost-sharing is found in Section 24.253:

Sec. 24.253 Termination of cost-sharing obligations.

The cost-sharing plan will sunset for all PCS entities on April 4, 2005, which is ten years after the date that voluntary negotiations commenced for A and B block PCS entities. Those PCS entities that are paying their portion of relocation costs on an installment basis must continue the payments until the obligation is satisfied.

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When exactly will Sunset occur?

Sunset will occur at midnight between 11:59 PM EDT on April 4, 2005 and 12:01 AM EDT on April 5, 2005.

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Will the PCIA Clearinghouse cease operations on April 5, 2005?

No, PCS carriers and self-relocating incumbents agree that services provided by the PCIA Clearinghouse will be required for a period beyond the Sunset date. The Clearinghouse will dispose of outstanding disputes, record obligation payments, prepare final reports for participants, and archive its records. The PCIA Microwave Clearinghouse Board of Directors established a plan to ensure an orderly shutdown of the Clearinghouse function. The Clearinghouse [sunset plan and timetable can be viewed here](#).

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Do unpaid cost-sharing obligations become void after sunset?

All of the cost-sharing obligations established prior to sunset will remain valid. There should be no limitation on a relocators' ability to collect reimbursement on obligations created during the ten-year cost-sharing period. Negotiations to satisfy obligations may extend beyond the sunset date. Also, installment payments may extend beyond the sunset date.

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EXHIBIT C

BIOGRAPHIES OF

RICHARD P. BIBY, P.E.

T. LAURISTON HARDIN, P.E.

Richard P. Biby, P.E. -- Rich is well known and highly respected within the wireless telecommunications, broadcast, and tower industries. His over 20 years of experience stretch back to the infancy of cellular telephone systems. A recognized industry leader, writing timely, informative articles in industry publications and speaking at top industry events, he is sought after by wireless carriers and tower companies as a valuable resource in regulatory compliance matters.

Rich is an active participating member of many industry organizations. These include the Association of Federal Communications Consulting Engineers (AFCCE), Institute of Electrical and Electronics Engineers (IEEE), PCIA – The Wireless Infrastructure Association (PCIA), Telecommunications Industry Association (TIA), Association of Public-Safety Communications Officials, Intl. (APCO), and a Radio Club of America (RCA) Fellow.

He is also an active participant for Telecom Siting Issues with Appalachian Trails Conference (ATC) and American Hiking Society (AHS).

Many remember Rich as President of Biby Engineering Services, P.C. and Communications Data Services. He conceived and established the first company to exclusively meet the demands of the wireless industry in response to FCC and OSHA regulations regarding human exposure to radio frequency electromagnetic energy, Sitesafe, LLC.

Rich also served as Principal Engineer of the New Technologies Group and Chief Technology Officer with Crown Castle International Corp. In those roles, he provided senior support of regulatory, technical and engineering needs, including FCC, FAA and OSHA compliance issues for internal regulatory, engineering, sales and zoning staff. He served as CCIC's representative to PCIA's Site Owners and Managers Alliance Technical Committee.

Biby Publishing, LLC is the publisher of AGL (Above Ground Level) magazine that delivers management, financial, marketing, construction, safety, engineering and technical information to readers in the wireless telecommunications site industry – tower companies, rooftop managers, utility companies, local government, public safety agencies, construction companies and consulting engineers.

In addition to this wealth of experience, Rich is a Registered Professional Engineer, has earned Bachelor of Science in Electrical Engineering / Computer Science (BSEE) and Masters of Science, Telecommunications and Computers Degrees from George Washington University and a Certificate in Technology Leadership from the University of Virginia.

T. Lauriston Hardin, P.E.

Founder & President

Hardin & Associates, Inc.

Mr. Hardin reformed Hardin & Associates, Inc. in 2002 to provide strategic services to the emerging wireless broadband market. Prior to that, Lauriston led the global Broadband Wireless Access (BWA) business development activities for the Marconi/MSI BWA Center of Excellence (CoE) located in Virginia Beach, VA, USA. The BWA CoE, the former Hardin & Associates, was a recognized leader in the wireless broadband communications industry, providing engineering, market planning and strategic consulting services to the broadband wireless industry. Their client list included such companies as BellSouth, WorldCom, Sprint, Austar, MoviCom, Blackstone, Boston Ventures, Foothill Capital and the FTC.

Mr. Hardin is a co-author of the Petition for Rulemaking for Two-Way Operations in wireless cable. In addition, he assisted in co-authoring the Petition for Declaratory Ruling for Digital Operations in wireless cable. He has published numerous articles and is quoted regularly in various media. Mr. Hardin is an internationally recognized expert in the field of broadband wireless telecommunications and is a featured speaker at both domestic and international symposiums and trade conventions.

Since 1984, Mr. Hardin has been avidly involved in the wireless and coaxial cable industry. Prior to Hardin & Associates, he held a variety of engineering and marketing management positions at General Electric Company including the Comband Group specializing in band compression technology.

He serves on the Board of Directors of the National ITFS Association (NIA) and served on the Board of Directors for the Wireless Communications Association International (WCAI) and the Managing Committee of the Broadband Wireless Association (BWA). Mr. Hardin is a Past Chairman of the WCA Engineering Committee and the recipient of the WCA's highest award – The Golden Eagle. Mr. Hardin is a member of the National Society of Professional Engineers (NSPE), Institute of Electrical and Electronics Engineers (IEEE), Virginia Society of Professional Engineers (VSPE), and Association of Federal Communications Consulting Engineers (AFCCE).

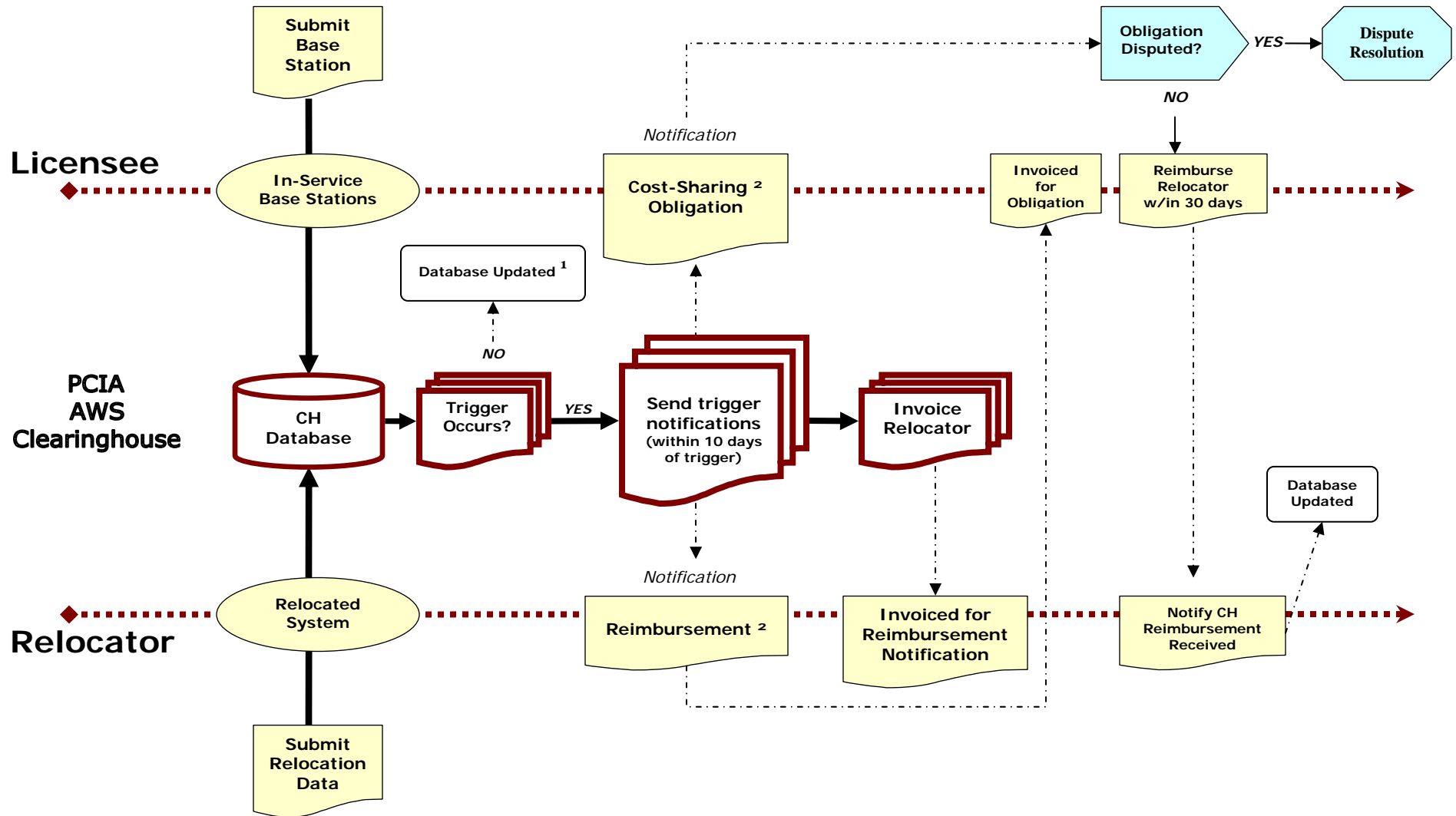
Mr. Hardin earned a Bachelor of Electrical Engineering degree from Georgia Tech and is a licensed professional engineer.

EXHIBIT D

PCIA AWS CLEARINGHOUSE COST-SHARING PROCESS AT-A-GLANCE

PCIA AWS Clearinghouse

Cost-Sharing Process At-A-Glance



- 1** Link and site data constantly enter the PCIA AWS Clearinghouse database. This data is compared to the existing participant data on file and all subsequent cost-sharing triggers can be determined.
- 2** Relocators may file link data without complete costs. The relocators file all technical information without costs. The PCIA AWS Clearinghouse will notify parties when triggers occur to incomplete links and the PCIA AWS Clearinghouse will issue regenerated obligation notices when cost data is received from the relocators.